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NORTH AMERICA
OPEN NETWORKING //
Integrate, Automate, Accelerate

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Extending CI/CD to support Cloud Native VNFs and Operations

A Proposal for Discussion

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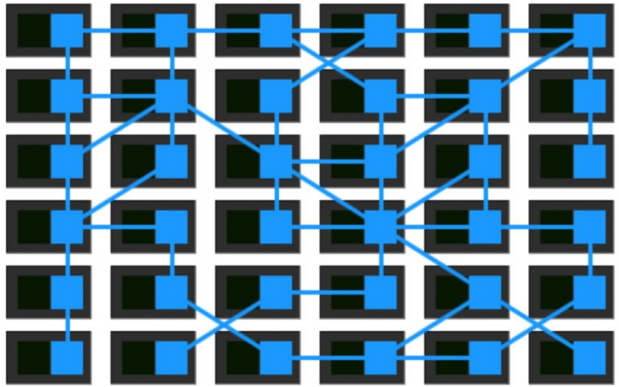
Being cloud native

- CNCF defines *cloud native* as
  - Containerized
  - Dynamically Managed by e.g. Kubernetes
  - *Micro-service oriented*
- *Micro-service oriented*
  - *The Service Mesh model (e.g. Istio, Conduit...)*



Control Plane

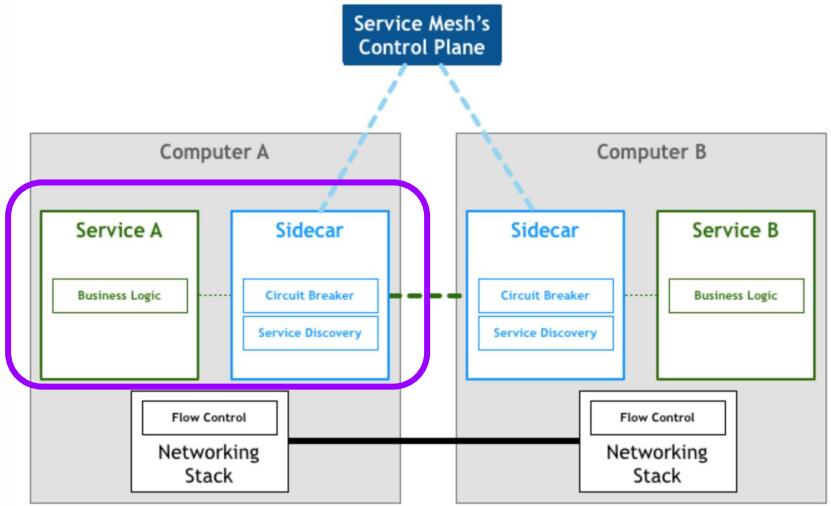
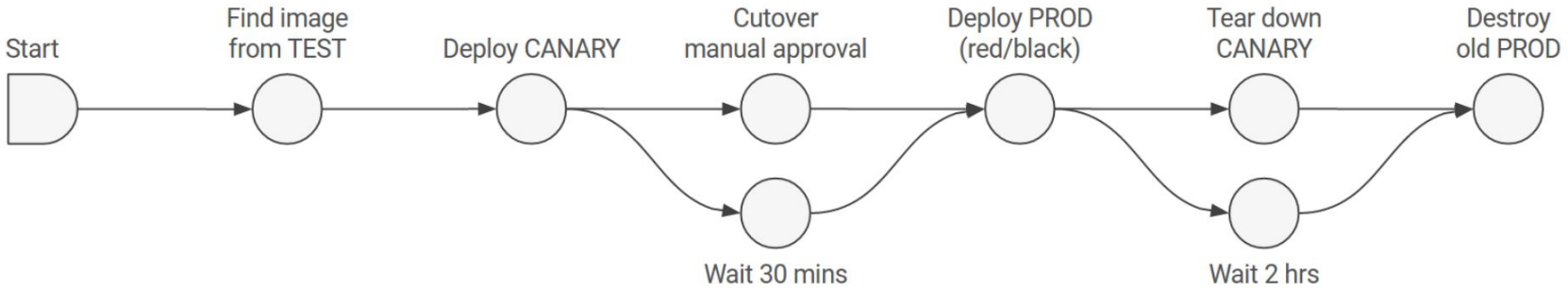


Diagram credit: http://philcalcado.com.

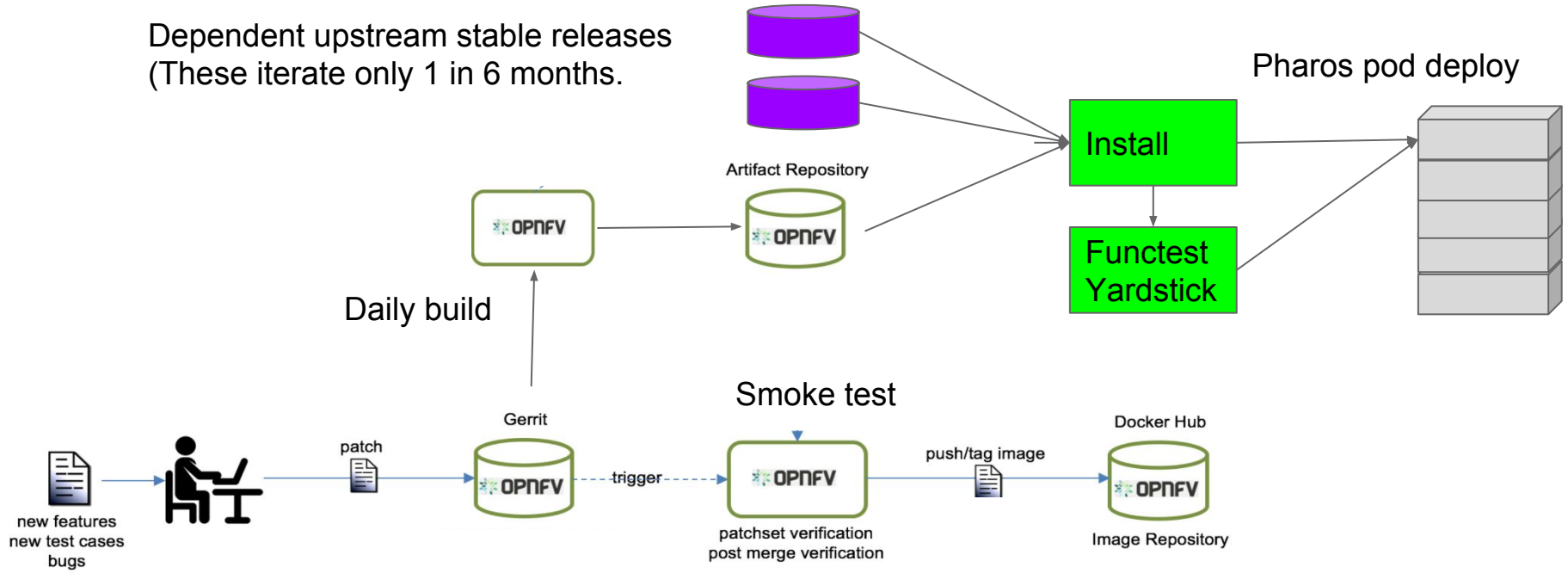
A Cloud native CD example

An example taken from Spinnaker doc:



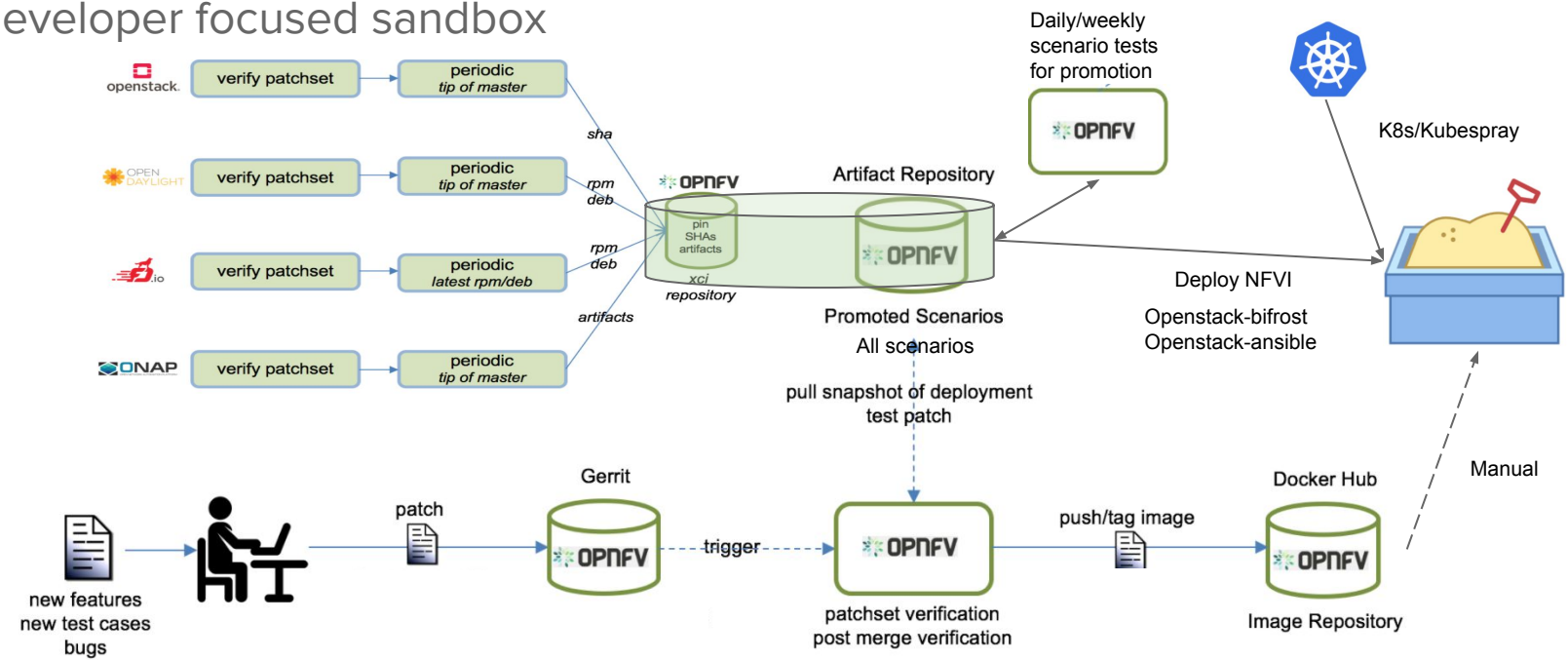
Background: the existing CI

- A simplified illustration of the CI in OPNFV - inaccuracies are mine



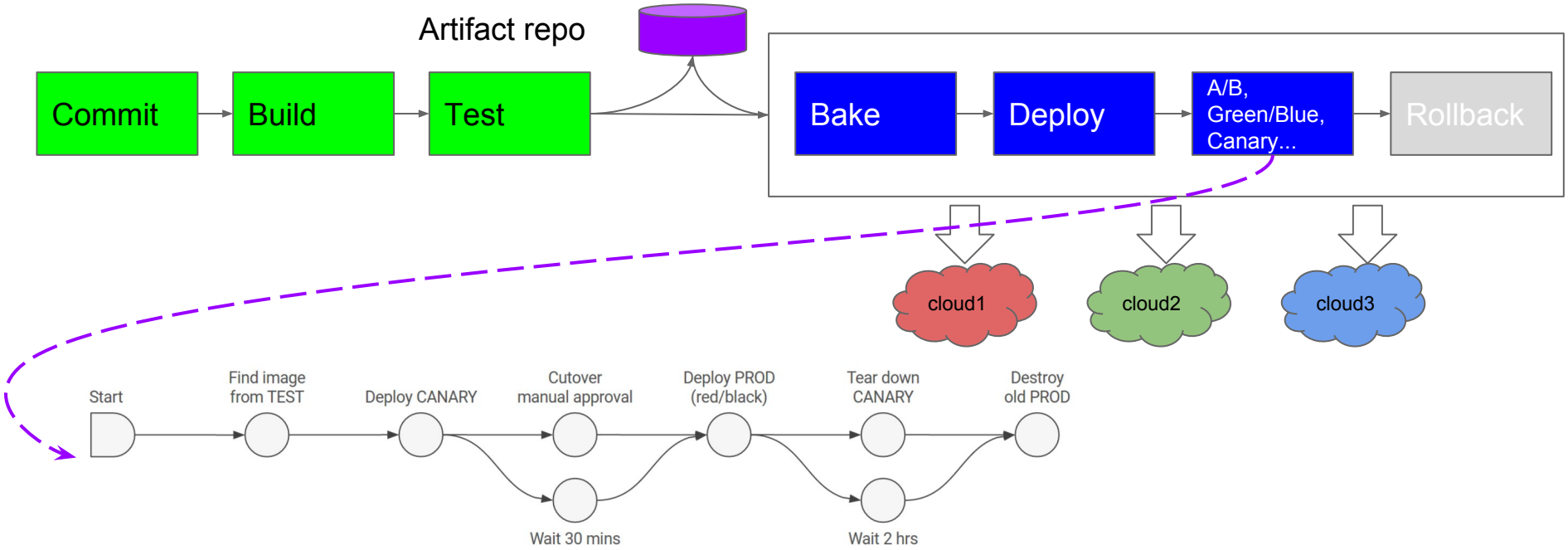
Background: the new XCI

- A simplified illustration - inaccuracies are mine
- Developer focused sandbox



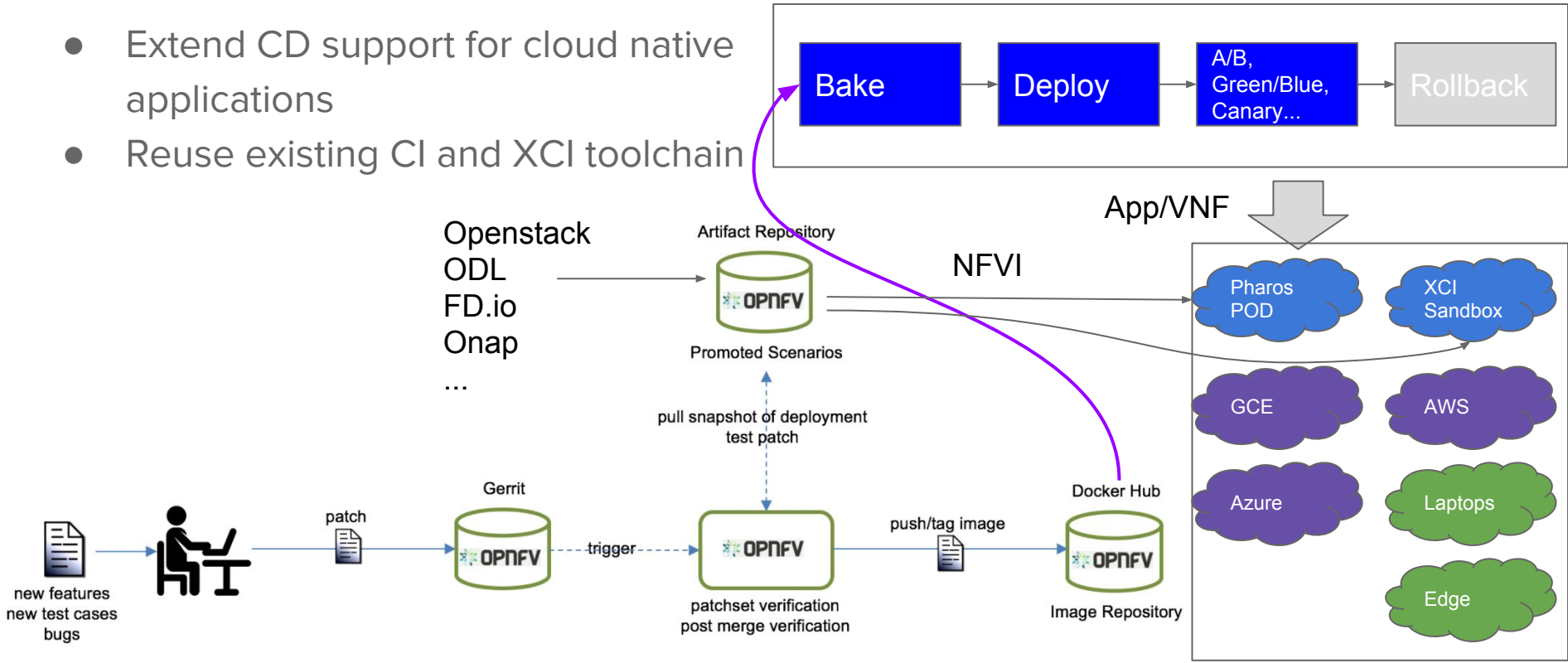
Cloud native CI/CD Requirements

- CD: Continuous delivery (and deployment) for applications
  - Fast-paced user driven/data driven CI/CD is a core competency for Cloud Native DevOps.



Extending CD to support Cloud native

- Extend CD support for cloud native applications
- Reuse existing CI and XCI toolchain



Next steps

- ONS 2018: getting feedbacks
- Gambia: Clover project is to develop a cloud native CD
  - Targeted for Gambia, Service Mesh architecture, Focused on CN-VNFs.
- Share experiences back to Infra WG/Releng and community
- Milestone rethinking and automation
- Request your feedback on generalized use of CD
  - E.g. VM-based, mixed, non-Service-Mesh
  - These are not currently in scope for Clover
  - Applicability/interests
- Q&A